

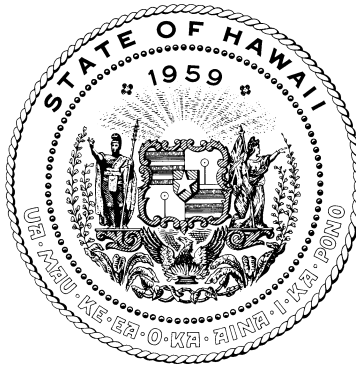
ANNUAL REPORT TO THE TWENTY FIRST LEGISLATURE

REGULAR SESSION OF 2002

NATURAL AREA RESERVES SYSTEM

AND

NATURAL AREA PARTNERSHIP PROGRAM



Prepared by

THE STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE

In response to Section 195-6.6, Hawaii Revised Statutes

Honolulu, Hawaii

November 2001

**ANNUAL REPORT TO THE TWENTY FIRST LEGISLATURE
REGULAR SESSION OF 2002
RELATING TO THE NATURAL AREA RESERVES SYSTEM
AND
NATURAL AREA PARTNERSHIP PROGRAM**

PURPOSE

Section 195-6.6, Hawaii Revised Statutes (HRS), requires an annual comprehensive status report on the Natural Area Reserves System (NARS) and the Natural Area Partnership Program (NAPP). This report will include but not be limited to:

1. Description of activities and accomplishments;
2. Compliance with Chapter 42D, HRS, requirements;
3. Analysis of the problems and issues encountered in meeting or failing to meet the objectives set forth in the management plans;
4. Status of public hunting opportunities;
5. Financial condition of the Natural Area Reserve Fund, including receipts and expenditures for the fund for the previous fiscal year (FY01);
6. Plans and management objectives for the next FY.

NATURAL AREA RESERVES SYSTEM (NARS)

1. DESCRIPTION OF ACTIVITIES AND ACCOMPLISHMENTS.

The statewide NARS currently consists of 19 reserves with a total of 109,165 acres on 5 islands. NARS was set up with the mandate of protecting the best remaining examples of native ecosystems on state-managed lands; which would act as a yardstick by which to measure changes occurring across the rest of the State. Annual program activities are based primarily on the long-term integrated management plans developed for each reserve. While NARS is based on the concept of protecting ecosystems, not just single species, there are many rare plants and animals, which are specific beneficiaries of protection through the program. Major management activities implemented according to the completed plans include ungulate control, non-native plant control, monitoring, rare species protection strategies, and public

education. While the majority of the Reserves have management plans, they are in the process of being reviewed and updated as new management actions are considered. To this end, the Department of Land and Natural Resources/Division of Forestry and Wildlife (DLNR/DOFAW) participates in a number of working groups to allow increased input by all concerned parties before existing plans are revised or new plans are written. Large-scale management actions such as fences additionally go through the Environmental Assessment process. Board of Land and Natural Resources (BLNR) approved management policies continue to be the general guide the NARS Program. These policies serve as guidelines for rule-making and the writing of management plans.

Non-native animal control.

Ground and aerial surveys of feral ungulates (pigs, goats, and deer) were conducted in various reserves. As outlined in the management plans, the type of control measures implemented depended on the reserve location, terrain features and relative abundance of non-native animals. Control methods used were public hunting, staff hunting, snaring (only in a few remote, fenced areas), and strategic fencing. Organized control (primarily public hunting) methods eliminated 190 pigs, 36 black tailed deer, and 220 goats. In addition, small mammal control efforts captured 33 mongoose, 28 feral cats, and 19 tree frogs (Manuka NAR).

As part of the continuing Feral Ungulate Control Program, fenced rare plant exclosures were maintained on all islands in and adjacent to reserves, and over 40 miles of existing ungulate control fence were maintained.

The Moloka'i Hunting Working Group continues to meet and participate as a community in long-term management of the Natural Area Reserves, Nature Conservancy Preserves, and portions of Kalaupapa National Historical Park. Public and organized hunting have kept feral ungulate activity levels from escalating; however, there is still room for increased control efforts particularly in the remote pali areas to reduce damage. The Working Group continues to provide an opportunity for land managers and local community members to interact and gain an appreciation for each other's perspectives while trying to protect and enhance native ecosystems.

The Maui Axis Deer Group (public and private sector members) met several times over the past year to discuss strategies for dealing with Maui's deer population. The expanding deer

population has negative impacts on human health, public safety, and maintenance of healthy native ecosystems.

On Hawai'i, the Puna and Kohala Regional Management Groups have not actively met in the past year, however management is being implemented as a result of many previous meetings. The Ola'a-Kilauea Group has been actively meeting and carrying out management activities across the broad landscape owned by the various partners (DOFAW, Hawaii Volcanoes National Park, Kulani Correctional Facilities, Kamehameha Schools, US Fish and Wildlife Service).

NARS is conducting field studies of predator control in the rainforests of Hanawai in East Maui to determine level of efficiency of protection for the most endangered bird in the world, the Poouli.

Non-native plant control.

Aggressive non-native plants were cleared from over 2,000 acres in Ku'ia on Kaua'i; Ka'ena Point, Ka'ala, and Pahole on O'ahu; Hanawi and 'Ahihi-Kina'u on Maui; Pu'u Ali'i on Moloka'i; Laupahoehoe, Pu'u o 'Umi, Manuka, and Pu'u Maka'ala, and Kipahoehoe on Hawai'i. These cleared areas are being monitored to prevent the re-establishment of undesirable non-native plants. Removal methods were by hand-pulling and the use of approved herbicides. Volunteers provided over 2,000 hours of the manual labor needed to remove the non-native plants. Bio-control projects for Clidemia in Hono O Napali on Kaua'i and blackberry in Ka'ala on O'ahu, continue under permit.

Rare Species Protection and Restoration.

Rare plant exclosures were maintained in different reserves on all islands, particularly on Kaua'i where numerous species are monitored year round for flowering and seed production, so that they may be collected at the proper time for propagation. Collection of rare plant seeds was increased on O'ahu and Kaua'i for propagation.

Outplanting efforts were increased in Pahole on O'ahu, and additional improvements to the mid-elevation nursery at the old Nike site were made to enhance the outplanting program. On Kaua'i the Koke'e Rare Plant Facility continues to be the focus for propagation and the Kalalau Rim outplanting site continues to be the recipient of plants from the Facility. On Hawai'i, Manuka and Kipahoehoe benefited from increased outplanting. Seeds are propagated principally at the Volcano Rare Plant Facility. Hawai'i staff also worked in

other areas of natural area quality to broaden efforts to protect and enhance native plant populations.

Two predator-free snail sanctuaries for the endangered tree snail *Achatinella mustelina* were maintained in Pahole.

Research.

The NARS Commission recommended approval by the Board of Land and Natural Resources of 65 Special Use Permits for research and educational use within NARS.

NARS staff continues to assist visiting researchers in the field and with logistics, as scheduling allows. At the very least, staff review and comment on all research proposals and meet with scientists before they do any field work, for safety reasons, as well as to insure that proposed work will

enhance the knowledge base of these areas and contribute to the long-term health of the Reserves.

Monitoring.

Monitoring is a necessary process to collect data over time to measure the condition and status of natural resources as they change due to environmental changes, human activities, and specific management programs. Different techniques are used depending on the type of resource monitored and the level of information needed. Monitoring plots continue to be maintained in the majority of Reserves. Detailed vegetation plots continue to be monitored in Pu`u Maka`ala on Hawai`i. Long-term monitoring and maintenance of over 35 miles of weed and ungulate transects were continued in 4 reserves on Hawai`i, and 20 miles of ground-based ungulate and weed transects activity were monitored on Oahu NARS. Of these, 9 miles were newly established. Sixty-five miles of ungulate aerial transects are read quarterly in Maui NARS. Staff are now performing resource survey and monitoring as part of their daily work activities.

Public Outreach, Youth Activities and Community Involvement.

A number of educational trips were led to various reserves on different islands. Public lectures were given at University of Hawaii classes and within the public school and private school systems. Photographic shows on Hawaiian native species and ecosystems were created for various venues. Attendance by NARS staff at job fairs increased public visibility of NARS.

The Youth Conservation Corps (YCC) saw 18 students working on various projects on Kaua`i for 7 weeks during the summer. Community volunteer groups helped on several projects, including animal control on Moloka`i and several hundred people participated in service trips to reserves on O`ahu. Community-based natural resource management options continue to be discussed on the Big Island through the Regional Forest Management Groups. The Big Island DOFAW staff continues to be an integral part of the `Ola`a - Kilauea Group which is made up of public and private land owners as well as regulatory agencies working together to protect the forest habitats in Pu`u Maka`ala NAR, Kulani Correctional Facility, Kilauea Forest Reserve, Ola`a Section of Hawai`i Volcanoes National Park and surrounding environs. Volunteers continue to participate in service trips to Manuka.

Several web sites are under various stages of development. The new sites, www.conservationhawaii.org, provides innovative ways of presenting conservation issues to the general public and www.mauiforestbird.org describes the important work being done in Hanawi. www.state.hi.us/dlnr/dofaw describes programs and activities within DOFAW.

Infrastructure.

Staff maintained 574 signs throughout the system and installed or replaced informational/boundary signs in several reserves. Of particular note is a new sign installed at Ka`ena in English and Hawaiian. Approximately 75 miles of existing trails were maintained in various reserves, primarily for management purposes. Existing helipads were maintained to facilitate management and monitoring work and provide access for emergencies; alien plant control being the major activity in these areas to limit spread to other areas. Over 12 miles of roads, mostly in Hawai`i, were maintained to provide hunter and management access. Road barriers continue to be maintained in Manuka on Hawai`i, to prevent dumping and illegal logging activities. Vehicle barriers are maintained on both sides of Ka`ena Point to protect the fragile dune ecosystem and cultural sites by prohibiting off-road vehicle use, and vehicle barriers are maintained at `Ahihi-Kina`u on Maui, to protect geological and cultural features from off-road damage. On Hawai`i, 4.35 miles of fenceline were constructed in Manuka and Pu`u Maka`ala; while 14.75 miles of fenceline were maintained in Kipahoehoe, Manuka, Pu`u Maka`ala, and Pu`u O`Umi.

2. **COMPLIANCE WITH CHAPTER 42D, HRS REQUIREMENTS.**

All management activities were in accordance with the provisions of Chapter 42D, HRS.

3. **ANALYSIS OF THE PROBLEMS AND ISSUES ENCOUNTERED IN MEETING OR FAILING TO MEET THE OBJECTIVES AS SET FORTH IN THE MANAGEMENT PLANS.**

Lack of adequate permanent dedicated funding is now the principal reason hindering expanded management or implementation of new management initiatives, enhancement of the system, revising or development of management plans, and increased community relations.

4. **STATUS OF PUBLIC HUNTING OPPORTUNITIES.**

Public hunting is the first control option of choice within the NARS, although hunting is not managed on a sustained yield basis. Increased public hunting opportunities have occurred in Pu`u Ali`i NAR on Moloka`i due to better communication and access through continuation of the Moloka`i Hunting Working Group, and on O`ahu and Hawai`i through construction and maintenance of better access roads and trails. These efforts provide access to areas formerly inaccessible to most people. On Kaua`i, the two reserves (Ku`ia and Hono O Napali) are accessible to some degree for public hunting, and trails are maintained for hunters and hikers.

5. **FINANCIAL REPORT.**

NARS, on lands under State jurisdiction, is supported through the General Fund, Appropriation 047 (see Table 1).

6. **PLANS AND MANAGEMENT OBJECTIVES FOR THE NEXT FISCAL YEAR.**

Where appropriate, reserve management activities will be guided by management plans. Activities on several reserves, especially those on the Big Island, will incorporate recommendations that result from current working groups. In some instances, a revision of an existing plan may be warranted after community concerns are considered. Plan implementation will focus on preventing, eliminating, or controlling the spread of non-native plants and animals that have a detrimental effect on native ecosystems. Other

management considerations will include local community concerns, monitoring, research, public education, volunteer support and improving access. Youth programs providing hands-on experience will continue to be a high priority.

NATURAL AREA PARTNERSHIP PROGRAM (NAPP)

This innovative program, established by the State Legislature in 1991 through Act 326, provides State-matching funds on a 2:1 basis with private funds for the management of natural resources on private lands permanently dedicated to conservation. This Program complements the existing State NARS System by providing long-term protection and management of unique natural resources on private lands. The NAPP provides support for a full range of management activities to protect, restore, or enhance significant native resources or geological features. DOFAW staff administers the Program, although the private applicant carries out all on-ground activities. Six-year long-range management plans provide funding and direction for each preserve. Since 1993, a portion of the Conveyance Tax, which is levied each time real estate property is bought or sold, has funded the program.

Beginning in FY01 via Act 269 ('00), the program has expanded its scope to include providing year-to-year funding for watershed partnership projects with the unused balance of the yearly allotment. An added benefit of NAPP funding is to provide a State cost-share for the partnerships to aggressively pursue Federal watershed and conservation grants. See Table 2 and 3 respectively for FY01 that show expenditures and the financial condition of the Natural Area Reserve Fund.

Details for these projects are:

1. Description of activities and accomplishments.

KANEPU`U PRESERVE: Landowner:	Dole Food Company, Inc.
Managing Partner:	The Nature Conservancy
Entered NAP Program:	FY 1992

Kanepu`u Preserve is comprised of 590 acres in 7 disjunct units and represents the last major remnant of a dryland forest community that once covered large portions of Maui, Lana`i, Moloka`i, and Kaho`olawe. Ten rare plants, 6 of them federally listed, have been reported from the Preserve. Protection from axis deer, removal/control of non-native plant species and use of the Preserve as a focal point for dryland forest restoration research and study have been and will continue to be the primary management activities. Volunteer public hunters continue to control axis deer in all fenced

units. Recovery of native vegetation continues. Fence repair or replacement of poor sections continues. Public outreach efforts include trained volunteer docents leading Preserve hikes for the general public. The self-guided nature trail to provide additional educational opportunities.

KAPUNAKEA PRESERVE: Landowner: Pioneer Mill Company, Ltd.
Managing Partner The Nature Conservancy
Entered NAP Program: FY 1992

This 1,264-acre Preserve is a component of regional protection efforts for the important watershed and native communities found in the West Maui Mountains. Containing 10 native dominated communities, 24 rare species or plants (5 federally listed), as well as 4 rare snail species, the Preserve's upper elevations are recognized as among the highest quality native areas in the State. Prevention of new introductions and control of both animal and plant non-native species are the primary objectives of Preserve management efforts. Highlights this past year include: no new ungulate incursions to the pristine bog areas and dramatic reduction of pig sign preserve wide; control efforts on non-native species such as guava, blackberry, and *Tibouchina herbacea* remain a high priority; and an active public outreach program continues through public lectures, monthly Preserve hikes, and service trips.

PELEKUNU PRESERVE: Landowner: The Nature Conservancy
Managing Partner: The Nature Conservancy
Entered NAP Program: FY 1992

Pelekunu Preserve, located on the north shore of Moloka'i, is a 5,759-acre Preserve established to protect the free-flowing Pelekunu Valley Stream System which is one of the best in the State. It is also part of a larger regional management effort that provides protection to over 22,000 contiguous acres on Moloka'i. Pelekunu contains nearly all the native Hawaiian aquatic fish, crustacean, and mollusk species. In addition, 27 rare plant, 5 endemic forest bird, and 2 endemic land snail species have been reported from the area. Protection of the watershed by reducing ungulate damage and reducing spread of non-native plants are the primary management activities. Feral ungulate control and monitoring in the back portion of the Preserve remains the primary focus. Use of volunteer public hunters continues to be utilized through the Moloka'i Hunting Working Group. During FY 01, 17 goats, 8 axis deer and 32 pigs were removed through ground hunting. Public outreach programs continue with public lectures, Preserve

overlook hikes, and the support of intern, Alu Like, and summer youth programs.

PU`U KUKUI WATERSHED MANAGEMENT AREA (WMA):

Landowner:	Maui Land & Pineapple Co.
Managing Partner:	Maui Pineapple Co.
Entered NAP Program:	FY 1994

With over 8,600 acres, Pu`u Kukui WMA is a critical component of regional protection efforts on West Maui that include over 13,000 contiguous acres. Fourteen native natural communities, 2 of them rare, are found in the Preserve, along with over 40 rare plant species and 6 endemic species of land snails. Primary management efforts are focused on the removal of feral ungulates and control of non-native plant species. Feral ungulate control efforts were maintained and very low or no animal activity levels were observed in the high priority upper elevation areas of the Preserve, although a total of 28 pigs were removed from lower areas. Vegetation recovery has been documented in previously disturbed areas. Small mammal trapping was conducted for rats in several locations. Control measures were continued for populations of priority non-native plant species including *Clidemia*, *Psidium*, and *Tibouchina*. Limited control and monitoring of the cannibal snail continues at various elevations in the Preserve. A number of survey trips documented the presence of new populations or new species records for the Preserve. Several research projects were carried out in the Preserve with logistical support provided by Preserve staff. Protection of the fragile bog ecosystem has been enhanced through upgrading and adding to the boardwalk in the high elevation region of the Preserve to replace existing trails.

KAMAKOU PRESERVE: Landowner:	Moloka`i Ranch, Ltd.
Managing Partner:	The Nature Conservancy
Entered NAP Program:	FY 1995

This 2,774-acre Preserve helps increase regional protection efforts for the important watershed and native communities found in East Moloka`i. Thirty-seven of the plant species are rare with 18 of these species listed as federally endangered. In addition, Kamakou protects habitat for 5 native forest bird and 5 rare native land snail species. The primary management focus is to prevent degradation of the native forest by reducing feral ungulate damage, limiting the spread of non-native, habitat-modifying plants, and preventing wildfire. The major accomplishment was the completion of the Kamalo/Kapualei fence, which provides additional watershed

protection for East Molokai. In the preserve, feral ungulate control activities continued to utilize volunteer hunters from the Moloka'i community. Staff and volunteer groups removing Clidemia, strawberry guava, New Zealand flax, pines, ginger, and blackberry in the Preserve did control of non-native plant species. These efforts continue, along with monitoring transects. Preserve staff provided logistical support for several research projects conducted in the Preserve. Public outreach programs continue to be important both on- and off-site.

MO`OMOMI PRESERVE: Landowner:	The Nature Conservancy
Managing Partner:	The Nature Conservancy
Entered NAP Program:	FY 1995

This 921 acre Preserve contains one of the largest and best remaining dune ecosystems with associated rare coastal plants in Hawai'i. Seven plant species and 1 native community are considered rare. Green sea turtles, Laysan albatross, and the Hawaiian monk seal are known to utilize the area. In addition, Mo'omomi also contains significant archaeological, paleontological, and cultural resources. Ungulate control activities in FY 01 centered on maintenance of fences to exclude domestic cattle from entering the Preserve. Non-native plant control for FY 01 (both staff and volunteer) focused on kiawe, Australian saltbrush and *Reichardia tingitana* removal. Protection of important cultural sites continues through cooperative efforts with the Department's Division of Historic Preservation and local community groups. Community outreach programs included preserve hikes and off-site activities. Staff provided logistical support for researchers investigating the land snail deposits in the Preserve.

WAIKAMOI PRESERVE: Landowner:	Haleakala Ranch Company
Managing Partner:	The Nature Conservancy
Entered NAP Program:	FY 1995

This 5,230-acre Preserve helps increase regional protection efforts for the important watershed and native species habitat found in the East Maui Watershed Area. This Preserve provides critical habitat for 13 native bird species, 8 of which are federally listed as endangered. Fourteen native natural communities, Two of them rare, are found in the Preserve, along with 25 rare plant species. The primary strategy for the protection of Waikamoi is to reduce damage to vegetation and soils by removing all ungulates. In FY 01, ungulate

control activities were continued with pig activity remaining moderately low, while Axis deer monitoring continues. The newly formed Axis Deer Working Group continues to meet and provides a forum for all concerned parties to address this problem. New fences constructed through the East Maui Watershed Partnership will help to prevent ingress of ungulates into Waikamoi. Control of habitat-modifying weed species included kahili ginger, gorse, and tropical ash. In addition, considerable effort is being devoted to *Miconia* monitoring and control to prevent its establishment in the Preserve. Volunteer service trips provided hands-on help with weed control and other efforts, while The Nature Conservancy Docents and National Park Service interpreters conducted educational hikes for the public. Service trips helped with non-native plant species control and provided further educational opportunities. Other public outreach has focused on community and school groups in the East Maui Watershed Partnership region.

2. Compliance with Chapter 42D, HRS, requirements.

All partnership projects are in accordance with the provisions of Chapter 42D, HRS.

3. Analysis of the problems and issues encountered in meeting or failing to meet the objectives as set forth in the management plans.

Natural resource protection and management are long-term efforts requiring time and energy commitments not often found in other projects. Restoration projects often take years before results are discernible. Several of the projects funded this year under the NAP Program may potentially take years to achieve the desired objectives. It is worth noting several issues that will remain for many years.

- * In the past, consideration and incorporation of community concerns into natural resource management programs, have not been addressed as well as they might have been. Community based management programs require a concerted effort and often take a long time to set up. Community advisory councils and facilitated working groups have been established and should help managing partners address local concerns in the coming years.
- * Long-range water development plans for Moloka'i have potential ramifications for Pelekunu and its undigested waters. Any water development plan needs to address the impacts on these natural resources to avoid competing and possibly counter productive state funded programs.

- * Partnerships, such as the East Maui Watershed Partnership and West Maui Mountains Watershed Partnership, will become increasingly important as ecosystem level issues are addressed. The East Moloka'i Watershed Partnership will help to expand the focus on Moloka'i beyond the NARS, NAP, and National Park Service boundaries. Ecosystem issues are complex and cut across political, legal, and geographic boundaries. Often, no one agency or organization is equipped to handle the issue in its entirety, thus making cooperative partnerships a vital necessity.

4. Status of public hunting opportunities.

- * The Lana'i Hunting Community has been actively involved with removing deer from the fenced units at **Kanepu'u Preserve**.
- * Due to liability and safety concerns, public hunting on **Kapunakea Preserve** is allowed only with staff supervision. Each request is considered on a case-by-case basis to ensure that hunter access to lower portions of the Preserve is permitted, while at the same time preventing disruption to the existing private agriculture operations.
- * **Kamakou Preserve** is open for public hunting on a year-round basis for hunting of pigs, goats, and axis deer with no bag limit.
- * **Mo'omomi Preserve** currently has no public hunting opportunities.
- * **Pelekunu Preserve** has had limited public hunting opportunities in previous years; the Preserve is remote and rugged with little access. In FY 01, Preserve staff organized volunteer ground hunts. Due to legal issues, aerial hunting was suspended, but is scheduled to resume with Working Group approval in the winter of 2002, and limited to specific remote, steep palis.
- * **Pu'u Kukui WMA** has a policy of issuing year-round, no bag limit pig hunting permits to hunters with valid state hunting licenses for hunting on Hololua Plantation lands below the WMA boundary.
- * **Waikamoi Preserve** has limited volunteer hunting opportunities. Haleakala Ranch employees may hunt in the Preserve as long as game is available. Public hunters who are willing to follow established guidelines, sign a liability waiver and volunteer form, are allowed to hunt in one unit on a limited basis.

5. Financial Report.

The NAPP, on private lands under permanent conservation easements and agreements with the State, and watershed projects, are supported through the Natural Area Reserve Fund (Special) (see Table B and C respectively). Revenues flow into this Fund from a 25% share of the Conveyance Tax on real estate transactions.

6. Plans and management objectives for the next fiscal year.

Preserve management activities will be guided by completed management plans. Plan implementation will focus on eliminating or controlling the spread of non-native plants and animals that have a detrimental effect on native ecosystems. Other management considerations will include monitoring, rare species protection, research, public education, and community support. Detailed project plans for all Natural Area Partnership projects and watershed projects are available through:

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LNR 407 Budget Summary FY 2001

Table A: FY01 Natural Area Reserve System Expenditures (047)
Total = \$1,179,000

NARS Personnel Budget FY01	Total = \$696,000
NARS Operating Budget FY01	Total = \$483,000

Branch Operations	Budgeted Expenditures
Administration	\$83,000
Kauai	\$85,000
Oahu	\$85,000
Maui	\$100,000
Hawaii	\$130,000

Table B: FY01 Natural Area Partnership Program Expenditures
(342)

Total = \$1,165,317

NAPP Preserves	Budgeted Expenditures FY01
Kanepu'u	\$141,351
Kapunakea	\$128,751
Kamakou	\$158,161
Mo`omomi	\$31,712
Pelekunu	\$133,287
Pu`u Kukui Watershed Area	\$223,333
Waikamoi	\$348,722

Table C: FY01 Natural Area Reserve Fund Watershed Projects
Expenditures (342) Total = \$341,000

NARF Watershed Projects	Budgeted Expenditures FY01
Koolau Mountain Watershed Partnership	\$104,000
West Maui Mountain Watershed Partnership	\$55,000

East Maui Mountain Watershed Partnership	\$65,000
East Molokai Watershed Partnership	\$40,000
Watershed Monitoring Project	\$24,000
Kohala Mountain watershed monitoring and preplanning	\$24,000
Watershed Information and Education	\$24,000
DOFAW direct costs	\$5,000